

## **Abstract**

A high strength low density multi-purpose panel. The preferred panel is made of a plurality of boxes, organized into rows and columns, and each preferably including four alternately inverted voids. The voids are preferably triangular in cross-section and rounded at their apex and corners. The box sides are preferably four solid panels. Cross panels, extending between opposite corners and between the faces of each box, intersect at each box center, resulting in an X-shaped cross in each box. Each box is rotated ninety degrees with respect to each adjacent box. Each box shares sides with four adjacent boxes and corners with four cater-corned boxes. The common sides create perpendicular sets of parallel braces running the panel's length and width. The shared corners align and join the X-shaped cross panels with the X-shaped cross panels of their cater-cornered neighbors, creating diagonal braces that run across the entire panel.